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AUTHOR Graham, Tom
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ABSTRACT

Material from academic journals, the ERIC database, and the mass media regarding workplace literacy was reviewed. Among the review's major conclusions were the following: (1) the growing complexities of the workplace and society have contributed to evolving definitions of workplace literacy that include development skills generally associated with management (interpersonal, negotiation, teamwork, problem-solving, critical thinking, and career development skills); (2) organizations must establish clear links in the relationship of literacy and work; (3) attempts to meet the operational needs of business and industry and the literacy needs of labor have resulted in the evolution of various approaches to delivering workplace instruction, including the general, functional, and participatory approaches; and (4) although business, government, and labor all support workplace literacy in principle, each has remained fairly reluctant to support workplace literacy programs. The following recommendations were made: expand workplace literacy research efforts, continue funding workplace literacy at the federal and state levels, prepare to continue after cessation of the National Workplace Literacy Program, align workplace literacy programs closely with companies' missions, design curricula relevant to workers' lives, and demonstrate impacts on the workplace beyond anecdotal data. (Contains 63 references.) (MN)

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Running head: WORKPLACE LITERACY

Workplace Literacy:
Critical Perspectives
on Learning Basic Skills at Work

Tom Graham

Seattle University

U.S. DEPARTMENT OF EDUCATION
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Abstract

This paper consolidates a variety of literature critical of workplace literacy. Material from academic journals, the ERIC database, and the mass media fell largely under the following catagories: 1) definitions of workplace literacy; 2) the relationship between literacy and work; 3) approaches to workplace literacy; and 4) support for programs. Critical views of each category are explained and followed by a general discussion. Recommendations include: expand workplace literacy research efforts; continue funding workplace programs at federal and state levels; prepare for life beyond the National Workplace Literacy Program; align programs closely with a company's mission; design curriculum relevant to workers lives; and demonstrate impacts on the workplace beyond anecdotal data. A reference list includes 63 entries.

Workplace Literacy: Critical Perspectives on Learning Basic Skills at Work

Background

In the 1980's, panic struck the American workplace. Foreign competitors finally overcame the worldwide economic dominance of the United States. Products stamped "Made in Japan," which twenty years earlier had caused American consumers to scoff, were now superior to many of our own. While Germany enjoyed a trade surplus, the U.S. trade deficit grew to $170 billion. America moved from the largest lender worldwide to the largest debtor. We no longer called the shots. Business and industry leaders warned that without swift action, the United States would continue to lose its competitive edge.

As part of the strategy to regain economic superiority, the nature and structure of work came under scrutiny and revision. America's huge industrial manufacturing base downsized and retooled. New technology not only took away jobs but required higher skills of employees who operated, maintained, and repaired that technology. To make the best use of personnel, companies wanted to adopt the organizational innovations of foreign competitors, which gave workers a

larger stake in overall production.

As a result of this trend away from traditional assembly line methods of manufacturing, a skills gap emerged. Business and industry were shocked to discover that American workers no longer had sufficient skills to cope with the new technology, nor did they have the communicative and problem solving abilities needed to work in restructured organizations emphasizing teamwork and Total Quality Management (TQM). Applicants were unable to meet employee literacy standards, thus making even entry level positions difficult to fill.

Reasons typically given for the skills gap included the excessive school dropout rate, the cumulative effects of graduating students who failed courses, the influx of immigrants, and the increased number of poorly educated minorities in the labor force (Business Week, 1992; Gordon, 1993). Considering America's failing schools as typified in the government report, A Nation at Risk (1983), prospects for the future were frightening. Coupled with the bleak outlook came an array of articles such as "Human Capital: The decline of American's Work Force," which warned companies to prepare for the changing demographics of nonmale, nonwhite, and nonyoung employees (Business Week, 1988).

Government quickly responded to the cries of

business and industry. The Secretary of Labor for the Bush administration, Elizabeth Dole, reaffirmed that "Education's ability at all levels--elementary, secondary, and post-secondary--to prepare people for work is the cornerstone of the nation's economy" (1989, p. 13). With the 1988 Adult Education Act, later renamed the National Literacy Act, the phrase "workplace literacy" came into its own as a separate category receiving federal funds to create partnerships between business, industry, labor, and education (Askov and Aderman, 1991). The National Literacy Act of 1991 linked literacy problems with poverty and the nation's economic well-being (Congress of the United States, 1991). The Act established the National Workplace Literacy Program (NWLP), a system of grants promoting partnerships between business and education providers under the Department of Education.

Through a series of conferences, task forces, pilot programs, articles, and ad campaigns, business, government, and the media combined to pound home the point that an ill-prepared workforce had crippled our economy and would continue to do so. Into the mid-1990's, President Clinton's Secretary of Labor, Robert Reich, continued the push by calling for a workforce that could compete with world's best in

workplaces transformed into high-performance enterprises (1994).

As a result of an upswing in the economy in 1992, and perhaps because of a preoccupation with other pressing national issues, panicky business executives and politicians became less vocal about literacy. But because of funding already in place, workplace literacy programs continued to expand. One estimate combining federal and state money figured $75-$125 million had already been invested (Hollenbeck, 1993).

Purpose of This Paper

With the inevitable production of future surveys, opinions, and worst case scenarios that contribute to the nation's shift from one crisis to the next, and with the ongoing concern for national fiscal policy, it is time to take stock of workplace literacy.

Although literature in the popular media abounds with shocking numbers and urgent calls to fill the job skills gap, there has been precious little critical discussion over programs, policies, and content concerning workplace literacy (Zacharakis-Jutz & Dirkx, 1993). The purpose of this paper is to review the small but growing body of research and literature critical of the assumptions put forth about workplace literacy. Specifically, this paper draws together into one

document critical literature concerning: 1) definitions of workplace literacy; 2) the relationship between literacy and work; 3) approaches to workplace literacy; and 4) support for workplace programs. A discussion and synthesis of findings are followed by recommendations.

This paper attempts to provide a balance to the exhuberant claims about workplace literacy, many of which were made in the 1980's and continue to be of influence. Ultimately, it is hoped this perspective might inspire reflection and direct future efforts that will best serve labor, employers, and the nation.

Definitions of Workplace Literacy

Generally Accepted Definitions

The design of a workplace literacy program is necessarily tied to a definition of literacy (Schultz, 1992). As might be expected, a single definition finds little consensus. Other than the fact that it usually takes place at the worksite, workplace literacy has been distinguished from general literacy education in that it is meant to be a collaboration between employer, the education provider, and occasionally the union (Askov and Aderman, 1991). In a very general sense, workplace literacy has often been described as basic skills--reading, writing, oral communication in English, and computation--in the context of the job.

But definitions from a group of company executives interviewed about committing to long term workplace literacy programs in Philadelphia suggested more:

-Has basic skills
-Reads well enough to cope and survive...
-Can read, write, find things in books...
-Able, with training, to handle the job
-General skills, reasoning, analytical...
-Part of the basic fabric of life (Literacy in the workplace, 1989, p. 4)

Despite being vague, these perceptions from business point far beyond the three R's.

The Department of Labor funded a study carried out by the American Society for Training and Development (ASTD) that is often cited and considered by many to be the definitive work expressing what employers want of employees. From its comprehensive survey in 1988, ASTD developed the following list of skills for non-professional employees of the future:

-Knowing how to learn
-Reading, writing, and computation
-Listening and oral communication
-Creative thinking and problem-solving

-Self-esteem, goal setting/motivation, and personal career development
-Interpersonal skills, negotiation, and teamwork
-Organizational effectiveness and leadership (Carnevale et al., 1990, p. 9)

The list bore witness to the fact that employers believed the workplace to be truly changing. Indeed, these are skills usually associated with management.

Because of the influence of the National Literacy Act of 1991 on funding for workplace literacy programs, its definition is frequently considered standard:

> literacy means an individual's ability to read, write, and speak in English, and compute and solve problems at levels of proficiency necessary to function on the job and in society, to achieve one's goals, and develop one's knowledge and potential (Congress of the United States, 1991)

According to this perspective, to function proficiently on the job is priority one.

Integral to all above understandings of workplace

literacy is the emphasis on an improved workforce for heightened productivity on the job. This "functional literacy" was described in a general sense by Beder as "the ability to derive meaning from the codified knowledge specific to a particular context" (1991, p. 6). More simply for workplace literacy, Beder's "particular context" refered to the skills needed to perform a job. The term "functional literacy" was coined in the U.S. Army, where it was applied to skills needed to carry out tasks in the military (Schultz, 1992). Philippi (1991) applied a functional definition to her approach for designing workplace literacy programs, which she thought should meet the need for employees to perform job tasks. "They (workplace literacy programs)...teach the applications of basic skills used to perform job tasks and not the content of the tasks themselves" (1991, p. 1). This notion of literacy placed it within strict parameters that could be measured through criteria such as job accuracy, productivity, promotion and pay figures, and lower accident rates.

Through the late 1980's and up to the present, literacy from a functional perspective has served as the primary definition when applied to the workplace programs. After several years of trial programs, the implications of such a definition came into question.

Alternative definitions

Key to definitions of workplace literacy are the people using them--employer, government, education provider, or worker. As shown earlier, employers and government came to an agreement on a functional or task based definition. Employers tended to look for the bottom line and tied literacy strictly to job performance, productivity, and cost. Government sought economic stability through increased productivity but was obligated to encourage achieving one's individual goals and potential beyond the workplace.

Educators have provided the most numerous and ever increasing voices of dissent. Their criticisms were exemplified in a survey conducted in Massachusetts of 42 workplace literacy programs (Rosen & Kale, 1989). Program coordinators and teachers were asked to compare their programs with Philippi's functional definition of workplace literacy developed in 1988. A wide majority of respondents found the definition too narrow, too much like job training and not enough like education, and disrespectful of students' interests and goals. Authors of the survey determined the definition unrepresentative of actual workplace programs in Massachusetts and called for a revision with a "much wider range of goals and purposes" (1989, p. 2).

Absent in the literature researched for this paper was how workers defined literacy--a point critics reiterated: what about the worker? The ASTD list of skills explained what employers wanted but did little to address what workers wanted or needed as individual learners or members of society (Galin, 1990).

Particularly under attack was the functional definition of literacy. Schultz (1992) found that it narrowed literacy to a set of materials gathered from the workplace, which meant literacy became a set of skills only in the context of the job to be performed. She went on to say that under a functional definition, curriculum and instruction were tied to accomplishing discrete skills taught in sequence in order to master competencies. There was a wider range of ways to use literacy, and we cheated and deceived students by not providing those other opportunities. Schultz suggested a notion of multiple literacies. The complexities of daily life--on the job, at home, in the community--didn't fit standard measurement devised and judged by someone at the workplace.

These multiple literacies were also expressed by Fingeret (1992). She called literacy "a shifting, abstract term, impossible to define in isolation from a specific time, person, place, and culture" (1992, p. 3).

Literacy included reading, writing, thinking, and computation but settlement on the extent of proficiency differed widely. Fingeret gave four views of literacy, which to her mind were too often isolated. In actuality, she insisted, each built upon the other. Fingeret referred to "literacy as skills" as the generic view that looked at encoding and decoding sounds, syllables, and isolated words. "Literacy as tasks" meant a person could successfully complete a specified task, or function. "Literacy as social and cultural practices" put the learner in actual social situations to complete a task. And, finally, "literacy as critical reflection and action" taught learners to ask good questions and challenge traditional conventions (Fingeret, 1992).

Workplace Literacy as Defined for this Paper

"Workplace," as used in this paper, indicates where learners are employed and is also the site of their literacy instruction.

As a synthesis of the constantly expanding ideas about literacy, this paper utilizes Beder's (1991) multiple definition and applies it to the workplace:

> 1) "general literacy" is the ability to derive meaning from knowledge stored in symbolic form;

> 2) "functional literacy" is the ability to derive meaning from the codified knowledge specific to a particular context;
> 3) "emancipatory literacy" is the ability to derive meaning from the codification of society itself (p. 6).

Summary

The growing complexities of the workplace and society have contributed to evolving definitions of workplace literacy. Business and industry claim to require more from workers than abilities to read, write, and compute. An expanded list includes skills generally associated with management: interpersonal, negotiation, and teamwork skills along with problem solving and critical thinking abilities, goal setting, and career development.

Functional literacy first captured the imagination of workplace advocates. Its emphasis on performing job tasks and increasing productivity spoke the language of many business leaders.

But for many educators, literacy was more complex. Functional literacy emphasized discrete skills at the expense of neglecting individual learners' needs. Literacy reached beyond the workplace, critics said. It

should emancipate workers to create change on the job and in society. Not to acknowledge so shortchanged learners. And as critics in the next section suggest, why emphasize literacy for increased productivity when the link between two is dubious?

Literacy and Work

The true relationship between literacy and work--the connection that government, business, and industry rely on to support their case for basic skills improvement and programs--is unclear. There is little proof that workplace literacy, or literacy as a whole, leads to more and better job opportunities, job advancement, or whether it increases productivity.

In an historical account of the measurement and usefulness of literacy throughout the world, Graff (1987) pointed out that measurements, or quantitative aspects of literacy, have received much more attention than the actual uses of literacy. Graff's research suggested that even if we knew the number of people at particular levels of literacy, we could make no conclusions about how their literacy was put to use. Historically, Graff explained, the fact that literacy rates may have gone up in a particular country did not necessarily mean that capabilities and qualitative

abilities rose with them. Instead of relying on "functional literacy" test results as indicators of temporal well-being or crisis, Graff recommended paying attention to "longer-term trends, changes in popular communicative abilities and channels, compositional factors within populations--in and outside schools, cultural changes in relation to media and technologies" (1987, p. 252). In conclusion, Graff (1979) called the underlying assumptions about the importance of literacy to be a myth. He argued, using 19th century historical accounts, that literacy was not always the key to jobs, money, and industrial development. Overall, Graff's work inferred that national movements to increase literacy in large part had to do with maintaining the status quo by "educating" the lower classes to accept the values of those in power (Gee, 1988).

Several authors pointed out the dubious relationship between literacy and desirable outcomes in the workplace. Mikulecky (1990) reported weak research largely based on the military programs that have not demonstrated a direct link between literacy and job performance. Nor has it been established that improved literacy leads to higher wages, better jobs, or increased productivity (Quigley, 1992; Zacharakis-Jutz & Dirkx, 1993). Through the ages, progress in trade,

business, and industry leaped forward despite low literacy levels. In modern times, the starting point for such leaps did not first aim at achieving higher literacy levels among the general population (Hull, 1991).

Other writers questioned the panic and sense of doom demonstrated by government and industry. Critics claimed business was making excuses. By pointing fingers at the worker as the main cause of America's slip in worldwide economic dominance, business diverted any blame falling upon itself. Weisman (1992) wrote in Phi Delta Kappan:

> By blaming their own faltering performances on inadequate work force skills, the nation's top chief executive officers have found a convenient avenue to escape any real economic policies that might disrupt business as usual (p. 721).

Weisman further contended that unless government policies and business practices changed, there would be no need for the purported huge numbers of highly skilled workers.

Teixeira and Mishel (1993) also declared injustice

when it came to blaming workers for economic problems. They supported their claim by examining the best available statistics on skill content changes for jobs and patterns in wage data. They concluded that the skills shortage theory considerably exaggerated what was actually happening in the workplace. Teixeira and Mishel's study of skills between 1977 and 1991 showed that requirements for language ability on the job rose 2.8%, mathematics 1.7%, and "requirements for specific vocational preparation, data handling ability, and interpersonal skills were virtually flat or even very slightly diminished" (p. 72). They also found the real wages of more highly skilled workers--college educated, white collar--had been declining since the 1980's while the less skilled workers had been pushed dramatically downward. They concluded by saying:

> Simply improving the supply of worker skills, although always desirable and necessary, will not by itself put U.S. industry on a high-wage high-skill growth trajectory...; companies must begin to restructure their operations to better utilize the skills already found in the work force (p. 73).

Hull (1991) claimed that if we took into account the complexities of work, culture, and ideologies from around the world and in America, companies lacked credibility when they put the burden of responsibility on the lowly worker. She went on to cite a report on world competitiveness that listed education and training as one of only 10 factors that affect international competitiveness.

The degree that jobs of the future are said to be changing has even fallen into question. The high-tech jobs we so frequently hear about will make up only a small percentage of positions, and at the most, low-skill jobs of today will merely become middle-skill (Mikulecky, 1990). Sarmiento (1991) reflected this when he contended that 95% of American companies presently cling to turn-of-the-century ways of mass production.

Summary

Without clear links in the relationship of literacy and work, critics not only find fault but a sense of panic in demands for a more literate workforce. Defendents of the worker contend bad managerial decisions, outdated business practices, and government policy largely contribute to poor productivity and a sluggish economy. Restructuring organizations from the top down must supercede literacy programs. Research

efforts must then be expanded to validate implementation and identify approaches to instruction.

Approaches to Workplace Literacy

General or generic approach

The need for workplace literacy programs is often considered a need for remediation. Because of limited expertise in the field during the 1980's, most early programs drew from a traditional approach to education by offering workers a kind of extension of high school (Jurmo, 1994). Well intentioned managers who wanted employee literacy levels to increase contracted with traditional providers like community colleges, where basic skills were treated as abstract and decontextualized (Sticht, 1993). Instruction took place in teacher-centered classrooms or in volunteer tutor situations where generic basic skills--reading, writing, and computation--were taught. Presumably subject to the same learning theories used in elementary and secondary schools, adult workers could take their newly acquired basic skills and "generalize" them to any context or task. It was the skeleton key to all doors. And like high school, some companies offered a choice of several different courses of study. United Auto Worker employees at Chrysler in Delaware, for example, could

choose from a list that included not only basic skills and GED preparation but speed reading, public speaking, career counseling, and bible study (Bussert, 1992).

However broad programs like that at Chrysler appeared to be, many critics were convinced that the content of coursework in most programs didn't connect to the workplace nor seldom with the personal goals of students (Kalman, 1992). For a growing number of workplace literacy participants, usefulness and meaning faded. In addition, basic skills in the traditional school environment were applied differently in the workplace (Keeley, 1991; Fagan, 1990). While the classroom emphasized reading to learn for retention and wide application, a large majority of reading done in the workplace was to perform tasks, which were quickly forgotten (Keeley, 1991).

In a study of eight workplace literacy programs, Delker (1990) listed the following as "worst case" situations, which he noted as "quite common" (p. 100): traditional high school equivalency content and format; standardized, normative testing; and teacher-centered instruction.

In addition, use of a general curriculum with the hope for transferal to specific skills neglected research findings (Askov & Van Horn, 1993). Although

formal research on workplace literacy is scant, studies have found the transference of decontextualized basic skills to be limited (Mikulecky, 1990). Retention of material appeared to be a major problem area for learners. According to Mikulecky, research by Sticht on military recruits found that even though students made gains in class when given traditional literacy instruction, they lost 60% of those skills after eight weeks. By the same token, those students who received literacy training in the context of the specific job retained 80% after the same eight week period. In other words, daily workplace responsibilities provided the repetition and practice needed for retention.

Functional Context Approach

The "functional" approach, or instruction to improve not only job-related basic skills, but also job performance, continued to produce positive results in research (Sticht, 1987; Brown, 1990). Not only did workers retain their skills, but by putting newly learned skills to immediate use at work, students learned quickly. To prevent attrition of skills, to insure direct transfer, and to speed the process, functional literacy worked because teaching strategies and needed skills closely resembled their application to the job (Philippi, 1991).

Philippi provided the consumate explanation of the functional context approach as being:

> the use of actual job materials and simulations to teach the applications of basic oral, reading, writing, computational, and reasoning skills to enable individuals to use printed and written information to perform specific job tasks competently (1991, p. 29).

Purpose is summed up in the phrase "to perform specific job tasks competently." For business and industry, the allure of a functional approach was obvious in its compatibility with "bottom line" concerns--higher productivity at lower cost.

Also integral to the approach were the terms "critical job task analysis" and "literacy task analysis" (often referred to as "literacy audits"). Critical job task analysis involved probing for changes in procedures or equipment at work, targeting jobs that need improvement, gathering relevant print material such as manuals or safety signs, observing experienced workers, identifying problems resulting from mistakes, and setting up a list of priorities. A literacy task analysis established an actual list of what it took as far as basic skills to do each job competently.

Toward the end of the 1980's and into the 1990's the functional context approach became the model for workplace literacy programs. The largest funder of programs, the Department of Education, sanctioned it and expected participants to use it as a criterion of success (Jurmo, 1994).

The functional approach seemed a healthy compromise to match the needs of all participants--business, government, and education. Certainly, most agreed it was superior to a generic method. Others, however, began to express misgivings.

Askov and Van Horn (1993) predicted trouble with a strictly functional approach like Philippi's. They contended that often times numerous jobs in one company were targeted for a skills upgrade. The instructor then faced a classroom of workers who performed many different jobs and had many different needs in order to do those jobs competently. Since individualized instruction was limited and not the norm, the task of conducting this multilevel class was enormous. Added to this was the fact that if, as business contended, the workplace was constantly changing, the demands on instructors to keep up would continue to increase.

Not only was it possible that too large of a variety of tasks existed, but Perin (1994b) observed

that prioritizing those tasks became difficult because the relative importance of tasks was debatable. Supervisors and others consulted in order to develop literacy task analyses could vary considerably in their views of the relative importance of tasks. Perin advised caution in two areas when using the functional context approach: 1) a workplace literacy program should draw distinctions between literacy skills, which should be the program's emphasis, and job skills, which supply the context only. Otherwise, instructors risked becoming trainers instead of educators, a position not always ideal since the basic skills teacher often lacked the expertise for training in a particular job; 2) the most prominent literacy skill used at the workplace should not always be given the most prominence in the coursework. To do so ran the risk of alienating students or killing motivation by studying skills they may already be able to handle effectively. Needs of the participants were what counted.

As criticized by Zacharakis-Jutz and Dirkx (1993), the functional approach would ultimately fail because it was not guided from a worker-centered perspective. They claimed that like general instruction, a functional approach still did not include the personal goals or input of workers.

Hull (1991) attacked the large emphasis a functional approach placed on skills needed exclusively for the job. In breaking jobs down to individual skills, as done on the literacy task analysis, "we will overlook important social components in work such as membership in work-based communities through which particular work practices are generated and sustained" (p. 24). Hull found danger in literacy audits. Even though they were meant to aid in developing a customized curriculum, she saw the potential for discriminating against workers. Employers could possibly use results in workplace literacy classes to make decisions on earnings, promotion, or termination when the actual connection between literacy and performance was still in question.

Schultz (1992) found the idea of literacy audits in direct contradiction with the initial cries of business and industry. Despite the workplace changing over to a more team oriented, high-performance environment, Schultz believed that literacy audits only sustained the old Tayloristic idea of work: individual skills repeatedly performed on the mass production assembly line developed around the turn of the century. "Reorganized companies," Schultz said, "are asking workers to become active learners in a workplace and passive students in the classroom" (p. v).

Advocates of the functional approach hailed it as ideal because it addressed job needs and job interests. Such an approach assumed that the job was everyone's "raison d'etre." Kalman (1992) questioned this ideal. In her study of a union-sponsored workplace literacy program, she found no evidence that work was the most meaningful aspect of the employees' lives. She proposed that many adults would rather think of anything but work. At least in the program she studied, when given the opportunity, students chose to focus classwork assignments on non-work related events in their lives. Kalman further noted that under the functional approach, learners were supposed to see immediate use of the newly learned basic skill in the context of their job. But when asked what they learned that could be applied to work, students in the union sponsored program "rarely had an answer" (p. 109).

Participatory approach

Few critics of the functional approach dismissed it completely, yet there has been a growing call for programs to do more if the "high-performance" workplace is truly the aim of business and government. Pritz (1994) outlined the characteristics of high-performance environments:

-Management functioning in the role of coach

-Emphasis on problem solving
-Work done in self-managing work cells, by individuals working on teams
-Management treating workers as "partners in prosperity," people with solutions who deserve respect (p. 29).

Critics maintained this future oriented, cooperative atmosphere could not be achieved exclusively by generic or functional context approaches. The idea of a high-performance workplace went beyond instruction for the purpose of performing job tasks competently. Such approaches tended to train workers only for their current job and neglected the possibility of job advancement or the evolution of jobs over the years (Askov & Van Horn, 1993).

A participatory workplace literacy program was worker-centered (Fingeret, 1992). Participants were consulted about the planning of the program, which was a primary step to encourage decision-making so crucial in the high-performance workplace (Perin, 1994a). The approach attempted to strengthen basic skills and combine them with analytical and teamwork skills applied to issues of direct concern to workers (Añorve, 1989). Participatory approaches flattened the traditional

top-down management style to involve workers as collaborators. Rather than concentrate solely on deficits in their learning, participants worked to understand and shape the larger organization (Jurmo, 1994).

In programs at two hospitals in the New York area, Rhoder and French (1994) initiated instruction with a functional approach module that emphasized literacy survival skills for specific jobs. They found that learner enthusiasm was short lived and, therefore, moved on to a second module that tied literacy to empowerment. Learners developed skills for problem solving, creative and critical thinking, and decision making at work. Module three went even further to encourage use of newly learned skills beyond work by giving learners more choices in subject matter.

Because of the novelty of the participatory approach, results and criticism have trickled in. Hart-Landsberg and Reder (1993) unearthed some discouraging news. They studied a manufacturing company converting to the high-performance model. Findings revealed that the approaches to literacy training used were least beneficial to those at the lowest levels and were inadequate to allow them to overcome their poor position in relation to more literate workers.

Summary

Attempts to meet the operational needs of business and industry and the literacy needs of labor evolved into various approaches for delivery of workplace instruction. The general approach, which many of the participants may have experienced negatively in K-12, lacked relevancy. The functional approach, with its emphasis on improving job task performance, came closer to bottom line expectations of companies. However, it risked providing only temporary satisfaction for learners and came under fire for not enlisting skills required in the new high-performance workplace. Like never before, a participatory approach included the worker as a key force in problem solving and decision making. More compatible with the high-performance aims of business, it gave learners a larger stake in the overall learning process.

With all the effort to revise and tailor instruction to the diverse needs of stakeholders, and with all the attention literacy has received in academic journals and the mass media, there are some interesting figures and trends concerning concrete support for workplace literacy programs.

Support for Workplace Literacy Programs

Business and Industry

With the help of government and the media, business and industry were largely successful in conveying their message that an inadequately qualified workforce necessitated prompt action. Depending on how one defines literacy and whose figures are used, anywhere from 20 to 80 million Americans have been publically declared functionally illiterate (Ford, 1992).

The problem, say critics, has been that despite all the awareness of educational needs, little has happened to remedy the situation (Jurmo, 1991). As Hollenbeck (1993) stated, "While they (employers) are generally aware that basic skill deficiencies exist among their workers..., they have not fully embraced education and training as the solution" (p. 81).

The influential ASTD survey in 1988 claimed $30 billion was spent annually by U.S. employers on training programs (Carnevale et al., 1990). Two years later, ASTD claimed an increase to $40 billion annually (Gordon, 1993). A special issue of Training magazine put the figure at $44 billion for companies with over 100 employees (Gordon, 1989).

But the percentage of that total allocated to basic skills education was small. In the same issue of

Training, only 11.3% of the 3,130 companies surveyed provided basic skills education, and it ranked last behind 14 other types of training (Oberle, 1989). In businesses with less than 500 employees, national estimates of the percentage offering literacy programs dropped to less than 5% (Hollenbeck, 1993).

McLaughlin (1992) maintained that overall only about 10% of the workforce received training and most of that by far was spent on the upper echelons of college educated management. Gordon (1993) concurred that less than 2% of training expenditures went to workers needing literacy help. And of the annual $40 billion ASTD said that business invested annually, 90% was spent by only 5% of American business. In addition to the billions already being spent on the latest technology, Gordon called on business to make parallel investment in human resources.

With all their complaints about illiteracy, why haven't business and industry done more about the situation? Again, Gordon believed that, generally, senior management viewed literacy education as a social problem to be handled through the school system. He cited a study that revealed only 10% of businesses had plans to use employee training to increase productivity.

Reich (1992) reiterated complaints that the needs

of the low-level employee were the most neglected. He suggested American companies found the employees they needed outside the country, either by relocating, contracting work out to foreign companies, or hiring immigrants. If, because of a skills gap, a company could no longer be choosy about the qualifications they desired in new employees, why not hire a functionally illiterate immigrant at a fraction of the wage a functionally illiterate native born American would require? Reich claimed that foreign companies in the U.S. spent $1000 more each year, per worker, on training than did Americn firms and that:

> although Consumer Reports ranks most Japanese cars higher in quality than American cars, it finds no difference between the quality of Japanese cars produced in the United States by American workers and those made in Japan (p. 27).

Finally, Reich echoed the sentiments of Weisman (1992) concerning the willingness of business to lambaste the education system for failing to produce an adequate workforce. All the while, business and industry have lobbied incessantly for tax breaks and incentives, which

has driven down their percentage of tax contributions over the years. This resulted in a drastic reduction in revenues from property taxes that normallly helped pay for public education.

According to responses from 28 interviews with executives in Philadelphia, support for workplace literacy programs depended on a company's primary business focus (Literacy in the workplace, 1989). Responses were classified into three groups: 1) "Get the job done," which included executives concerned largely with the short term and maintaining the status quo; 2) "Work skills literacy," which were those in support of providing skills needed for the workplace only; and 3) "Work skills and personal literacy," which added enhanced quality of life outside work as a focus. The report on the responses of these executives found a correlation between the various focuses and the existence of workplace literacy programs: the higher the worker was held as a resource for the job at hand and for future jobs with the company, the more likely was the existence of programs aimed to educate beyond the workplace.

These same executives gave the following list of barriers for companies committing to workplace literacy programs:

-Literacy education is an inappropriate use of a company's resources
-Literacy skills aren't necessary for certain jobs
-Investment in literacy education is cost prohibitive
-By admitting the presence of serious literacy problems, a company's image could be threatened (p. 17).

In a survey of representatives from 16 businesses with over 500 employees, Brown et al. (1990) found that even though industry perceived a need for a literacy upgrade in employees, companies were unlikely to pay for programs. Only two of 16 companies said they might be willing to set up programs without the help of outside funding. Since those two were larger companies with more resources, Brown et al. suggested smaller companies would be even less likely to provide a budget for literacy programs.

Sarmiento (1991) argued that if, as was usually the case, public money went into workplace programs, we must look at the organization applying for the funds. What is the company's focus? How does the company manage its personnel? We must decide which focus and structure

best accommodates production and growth, then award funding accordingly. Both Sarmiento and Sticht (1993) conveyed the need to encourage companies to move toward a high-performance emphasis, thus creating a need for workers to utilize higher order cognitive skills.

Teixeira and Mishel (1993) alluded to a "field of dreams" approach to jobs, where "if we build the workers, jobs will come" (p. 69). In other words, the belief that a highly skilled workforce produces a high-performance workplace is unfounded. Teixeira and Mishel contended that industry was reluctant to embrace a high-performance workplace because of political reasons: fear of empowering the worker, loss of wage control, and reduced possibility of contracting work to cheaper labor outside the country. Fingeret (1990) also believed employers feared a workforce empowered through literacy because participants might demand better working conditions, higher pay, or simply leave for better jobs.

Cunningham (1993) went so far as to argue that the modern high-performance workplace was actually business as usual. "There are still owners," she said, "who have power to close the enterprise down here and to move it to another country" (p. 14). And when such was the case, Cunningham seriously doubted the existence of a

high-performance workplace environment in that foreign country.

Finally, weak company support for workplace literacy programs was reflected in an ethnographic study by Hull (1991). As much as business lauded the virtues of a high-performance workplace, the harsh reality, as portrayed by Hull was:

> a world where education holds out false promises, where work is monotonous and uncertain, where the workplace is autocratic and punitive, where the chances of those who are most in need are "slim to none" (p. 94).

Government Support

In September of 1989, 50 governors gathered for an education summit that produced six education goals for the year 2000. One of those goals (all of which were emphatically endorsed by then President Bush) stipulated that every adult in America would be literate and have skills needed "to compete in a global economy and exercise the rights and responsibilities of citizenship" (Brand, 1990, p. 27). As part of the effort to reach this goal, the federal government plugged in structures to jump-start workplace literacy with awards totalling

$60 million between 1988 and 1991. Brand (1990) pointed out that the Department of Education had steadily increased its budget for adult education, and that it supported more funding for workplace literacy in order to double the number of projects.

To help offset the workplace literacy spending inequity between large corporations and small businesses, the National Literacy Act of 1991 put a priority on grants for smaller organizations (Zacharakis-Jutz & Dirkx, 1993). The Act also set up the National Literacy Institute to serve as a national center for technical assistance, pilot projects, and research.

The election of Bill Clinton did nothing to decrease financial support for workplace literacy. Fiscal year 1993 saw just over $21 million in NWLP grants (National workplace, 1993). For the 1995 budget, $18.7 million was earmarked for Workplace Literacy Partnerships with $4.9 million going to the National Institute of Literacy (Judith Snoke, personal communication, February 25, 1995).

However, Chisman (as cited in Talking heads, 1992) lamented that grants for partnerships between business and education providers were really the only national policy we had concerning workplace literacy. He argued

we didn't yet know the types of programs most useful to participants or, specifically, about their results and costs. Small, short term grants for a year or two, Chisman believed, didn't answer questions about who providers should be or whether current partnerships between traditional education providers and business were the most effective arrangement.

Hollenbeck (1993) saw government investment as far below the need. According to his calculations measuring the social benefits of workplace literacy programs, public support should be five times current levels.

Few critics of what government has done to support workplace programs called for a reduction in funding. But with a House of Representatives and U.S. Senate controlled by Republicans elected in November of 1994, cuts in workplace literacy programs were the order of business beginning in March 1995. States would receive $252 million in block grants already allocated in the 1994 budget, but money specifically for Workplace Literacy Partnerships--$18.7 million--and the National Institute for Literacy--$4.9 million--was to be rescinded and the two organizations terminated.

The result would increase the burden of financial assistance for state governments. In addition to the loss of federal money, which through the years had been

the key factor for the existence and continuance of workplace literacy programs, critics predicted and feared states working in isolation without a central federal department. As early as 1991, the loss of networking and tracking program effectiveness worried 40 participants in NWLP (Workplace education, 1992). They were also concerned that without federal stipulations for the use of money, programs under state control would become watered down and stretched too thin.

(Through lobbying efforts in March and April of 1995, the National Institute for Literacy was spared. The fate of Workplace Literacy Partnerships is still unknown.)

Employee Support

Reports on employee enthusiasm for workplace literacy programs has been scant and mixed. A study of 227 sawmill workers in Canada revealed that despite a significant number of employees below literacy levels required at work, the employees saw themselves as having little trouble performing their duties (A preliminary study, 1991). If in doubt about certain reading materials, they simply asked.

The 16 executives interviewed in Philadelphia gave the following as their perceptions of why workers might not participate: concern that a company would

stigmatize them, thus restricting their advancement; fear of not succeeding in the program, which would lead to other fears about job security; and mistrust that employers were attempting to weed illiterates out of the company (Literacy in the workplace, 1989).

Fox (1990) portrayed workers in need of literacy education as ashamed, guilty, frustrated, and exhibiting low self-esteem. They didn't want their lack of ability publicized. In some programs, attendance was mandatory, workers received no release time, or other demands on workers' time restricted participation, all of which had potential to produce animosity toward management (Workplace education, 1992).

For workers to participate, certain conditions are generally required. Findings at the sawmill in Canada reflected those conditions. Three-quarters of those questioned said they would be more likely to take part in a program if:

> -it would help get a better job
> -it were needed to keep their present job
> -they were given time off to take it
> -non-mill personnel were teaching
> -it were offered outside the mill (p. 20).

In Delker's (1990) worst and best case scenario for successful workplace programs, employee participation, and therefore, support, was best insured through: 1) instruction on the premises; 2) release time for classes; 3) relevance of coursework to quality, competitiveness, and job security; and 4) recognition for successful program completion.

Perin (1994a) advocated that workers be active participants not only during instruction but in all phases of the program. In her study of five psychiatric hospitals, health care workers took part in advisory committees, elected delegates to air concerns about the program, evaluated the program, and sat down with instructors to design an individualized education plan. To increase support for workplace literacy programs, and to help create a learning environment, Perin found that most adult learners would like to be consulted.

Summary

Business, the most vocal stakeholder about workforce literacy levels, has been reluctant to offer basic skills at the workplace. It tends to consider literacy as the responsibility of traditional education providers. To ease the financial burden, government has attempted to stimulate interest through grants, but rarely do companies continue programs when funding ends.

Employees seem to support workplace literacy programs if certain conditions like convenience, confidentiality, and relevance are met.

In principle, business, government, and labor support workplace literacy. For business, which remains wary, and government, which has recently shown an inclination to end funding, the costs of workplace literacy appear to outweigh benefits.

Discussion

Compared to the abundance of claims and success stories for workplace literacy, few articles in journals, periodicals, and ERIC database were comprehensively critical. For this paper, the extracted bits and pieces of available critical literature largely fell under four categories: 1) definitions of workplace literacy; 2) the relationship between literacy and work; 3) approaches to instruction; and 4) support for programs.

Since the late 1980's, economic and social factors have brought workplace literacy into the spotlight, and only recently, with the circulation of project reports and evaluations--particularly concerning federally sponsored programs--has critical literature become more readily available.

Finding the Right Meaning

Critics do a valuable service in pointing out the complexities of defining literacy. Those outside the field of education are not always familiar with these issues and too often think of literacy in antiquated terms.

In addition to including or excluding certain learners from participation, the selected definition of workplace literacy also greatly affects the design of programs. Design, in turn, affects participation, retention, and success. Research and experience indicate that business leaders who settle on definitions of literacy from the past will struggle keeping a workplace program in operation. A general curriculum designed around the skills of reading, writing, computation, and oral communication in English without due regard for relevance--either at the workplace or away--is likely to be ineffective.

The need adult learners have for relevance and applicability of subject matter necessitates an expanded view of literacy. To actually apply reading, writing, and computation to their work and everyday lives, learners may require additional skills that include interpersonal and problem solving capabilities. A definition of literacy in a functional context is a

first step in providing relevancy. Functional literacy comes closest to fulfilling the needs of companies whose workers have specific tasks to complete. Because of its specificity, functional literacy has the advantage of being more easily measureable in the workplace than general or emancipatory literacy.

Companies following the trend toward high-performance workplaces may find a strictly functional definition too limiting. A high-performance work environment means increased worker participation in the overall production process. Despite management's claim that such a workplace respects what employees bring to the job, workers will still have to earn that respect. High-performance strategies demand the higher order thinking skills in Bloom's taxonomy: application, analysis, synthesis, and evaluation. The very nature of these cognitive processes--if learners truly acquire and apply them--will inherently increase participation in the workplace and, possibly, inspire workers to transform it. Much, however, depends on individual learners and the structure of the workplace. For instance, the exact meaning of transformation or the extent to which a company will allow it to happen are unclear. Chances are that transformation will represent a relative idea contingent upon the company's overall mission.

As expanding views of literacy become accepted, perhaps future definition debates will center on basic skills "training" as opposed to "education." Initially, workplace programs moved from a general education format to a "training" oriented, functional literacy. Today, the call for emancipatory literacy embraces the broader realm of "education." Certainly, in many workplaces the lines will become blurred. Often with considerable pride, providers consider themselves to be professionals in one or the other. The group of educators interviewed in Massachusetts could not agree with Philippi's functional definition of workplace literacy, but it would be interesting to know what company management thought.

The distinction between training and education impacts matching providers with businesses, especially those partnerships involving traditional providers like community colleges. The workplace setting offers challenging terrain often requiring adjustments in teaching and accountability. And the following point from Chisman (as cited in Talking heads, 1992) is well taken: we don't know if these partnerships are the most effective route to take. Would independent consultants better serve the needs of business? Or would arrangements made with a company for training prior to

hiring be more effective, thus alleviating issues like release time?

Companies will need and expect more than traditional subject matter and delivery. Providers will need to know the ways and implications of high-performance environments and TQM.

Literacy and the Payoff at Work

Beder (1991) suggested that in good economic times, when jobs are usually plentiful, literacy may not be as important for finding employment. Perhaps the reverse can be said in poor economic times when jobs are scarce, and either an employer's market or employee's market determines the demand for literacy education.

Any controversy about workplace literacy programs leading to better opportunities, advancement, or an increase in productivity must look at cases individually. Graff was correct in asserting that sheer numbers on literacy levels do little to describe the effects of literacy on the workplace. But as the definition of literacy continues to expand, measurement of effects becomes more and more difficult. Advocates and dissenters agree on the paucity of research connecting literacy to work. The variables that might effect outcomes are far reaching. Imposing controls on variables are all the more challenging in a workplace where management may see other issues as more pressing.

Hollenbeck (1993) cautiously countered arguments about the lack of gains from workplace literacy programs with results from his study of companies employing less than 500 in Michigan. His report typifies many of the evaluation findings on workplace literacy programs. Admitting that evidence was not overwhelming, Hollenbeck nonetheless noted gains in communication ability, mathematics, and output quality. Perceptions of employers and employees about their particular programs were also positive. Employers generally saw their literacy programs as improving basic skill levels and producing small positive effects for the company's production. Therefore, companies with programs felt benefits outweighed the cost. An almost universal feeling among participants of workplace programs was increased self-esteem, self-confidence, and morale. Hollenbeck offered caveats about the study but even suggested positive economic improvement, though overall, employees were impatient that education had not led to higher pay and job advancement.

Other evidence to counter critics of the relationship between literacy and work was the numerous studies of completed or ongoing pilot workplace literacy programs. A study of 150 participants in Seattle found improvement in basic skills, interpersonal communication

with co-workers and supervisors, and willingness to ask questions and accept criticism (Seattle-King County Private Industry Council, 1990). All participants believed the program was beneficial.

Recipients of a NWLP grant in Oregon noted moderate evidence of improved employee performance and productivity through better oral, written, and reading skills, which also enhanced self-esteem (Castaldi, 1992).

Literature illustrating the benefits of workplace literacy does so in large part by citing psychological gains. But are attitudinal changes in employees enough? In some cases, perhaps, but the fact that so few companies continue workplace programs after grants expire indicates the need to demonstrate additional gains. That boils down to more time, particularly on the part of business, which must target the outcomes that most impact the workplace, choose tools to measure them, decide who will carry out the measures, how it will be done, and when. Otherwise, data gathered on workplace impact will be anecdotal, largely from interviews with supervisors and managers (Iglitzin, 1995). Efforts to quantify workplace outcomes will take strong commitment from all levels of company leadership.

Finding the Way

Critics of approaches to workplace literacy must keep in mind the vast array of businesses, their focuses, and unique needs. Workplace literacy research confirms the effectiveness of a task and performance based approach. It may serve some businesses perfectly well. As the executives interviewed in Philadelphia revealed, not all businesses are looking for the breadth of skills as designated by ASTD. Indeed, few companies operate under the high-performance flag.

Business providing a general education at the workplace has all but disappeared from the literature. Philippi's task analyses combined with research that supports focusing on specific skill applications in order to produce quick results speak strongly to business and industry. Used exclusively, however, the functional approach has the potential to diminish learner interest.

Participatory and emancipatory approaches are gaining favor with providers, learners, and businesses. The NWLP program in Washington state known as Workplace Improvement of Necessary Skills (WINS) is one example. Partnerships were established between providers and companies aiming to implement high-performance work strategies. In an effort to offer suggestions for

curriculum to various providers throughout the state, project developers suggested first introducing team skills so commonly associated with TQM. Ideally, learners would use these team skills to facilitate learning more traditional basic skills as needed. The approach incorporates individual and cooperative learning with problem solving and practical application. One of the sites has decided to kick off the program with a course on learning to learn, which focuses on the relationship between the worker, their job, and the organization. Every effort is made to represent the workplace as a center for learning. Not only will workers discover their learning preferences and strategies, but they will look toward planning their futures. Since companies can no longer promise lifelong employment, workers need an inventory of their skills along with the ability to market them. Perhaps the most amazing aspect of such a course is the company's whole-hearted support.

Getting behind Workplace Literacy

Business and industry are unwilling to invest time and money in a venture of questionable benefit. The view that modern workplaces are also centers for learning is accepted by but a few of the most progressive organizations. Most businesses must be

shown results before assuming the burden of what it sees as traditional education's responsibility. At the same time, business and industry have shown a willingness to experiment if their financial burden can be eased through outside funding. But should a business be expected to expand from "training" to "educating" beyond workplace applications?

Cultural aspects slow restructuring to a high-performance workplace and converting it to a center for learning. Over the years, it's just not the way business has been done. Today, when past modes of operation that produced decades of success still dominate, classes in learning to learn lack priority with most executives.

Solutions may depend upon whom society wants to educate its workers in the future. Currently, we ask schools to fulfill a gargantuan set of purposes such as knowledge acquistion, intellectual development, citizenship, individual development, vocational training, and character building. How many of these does society wish to turn over to organizations motivated by profit? And for how many of these are companies willing to assume responsibility? Demands from corporate leaders to reform schools will do little to alleviate the current literacy situation. Chisman

and Campbell (1990) noted that "at least three-quarters of all Americans who will be working in the year 2000 are adults today" (p. 150).

Ironically, just as data through improved methods of evaluation are coming in, the number of programs may soon dwindle. Critics of workplace literacy have largely called for reform in overall purpose and approach--not necessarily the abolition of all programs. As of the completion of this writing, little has been published about the workplace rescission proposals pending in the U.S. Congress. The Republican emphasis on block grants that supposedly allow greater freedom for states to allocate money according to need could ignite initial controversy. Under the theory that individual states best know what to do with funds, block grants aim to cut down on federal regulations. At issue is accountability. While volumes of federal regulations may edge some citizens toward paranoia and hysteria, a less cynical position views regulation as an effort to prevent abuse. With no strings attached, nor a centralized organization for sharing the design, implementation, or results, there is a potential for the slow degeneration of programs.

On the other hand, perhaps less stringent federal guidelines will inspire experimentation. Progressive

states might attempt to move from the functional task-based approach so commonly tied to federal grants into a more participatory and emanicipatory one.

In addition, rescinding NWLP funding may simply be smelling the coffee. Isn't the program just another entitlement in a society that has decided to re-emphasize self-sufficiency? The goal to stimulate interest through NWLP so that business and industry would continue programs on their own has largely failed. Why keep pouring tax dollars into efforts guaranteed to stop when the grant ends?

Yet, NWLP has served a number of useful purposes. It has allowed implementation, examination, and analyzation of various approaches to workplace literacy. Evaluation procedures have been developed and revised to aid in discovering what works and what doesn't. Requirements for program descriptions have provided a rich data base for reference and sharing of ideas. The program has opened a healthy dialogue and debate, thus generating new ideas for the field. It has helped forge partnerships between business and education providers and laid the basis for potential long standing relationships. The partnerships, in turn, have helped shape an emerging integrated curriculum that attempts to address a wider range of needs. Perhaps most

importantly, NWLP has attempted to offset the advantage of large corporations by offering grants to smaller businesses.

Summary

The most vehement of critics of workplace literacy paint an "us versus them" picture of labor and business. More compromising critics understand the issues on both sides and look for ways to meet the needs of all concerned.

When it comes to educating and training the workforce, labor and business may have forged a win-win situation. Much depends, however, on the sincerity of business and industry to restructure old methods of management. On paper, the high-performance strategies for doing business are compatible with participatory approaches for delivering literacy instruction. Both stretch the bounds of basic skills. Both, if truly practiced, will lead to an unknown reshaping of the relationship between worker, job, and society.

But the wishes of business for employees with higher order thinking skills must not be confused with reality: the vast majority of present day workplaces holds to past hierarchical structures. For these less bold companies, if they choose to offer programs at all, there remains the skills-based approach to improve job

performance. More frequently tested and quantified, it appeals to the "bottom line" notion of management.,

All approaches and the overall relationship of literacy to work and productivity suffer from a lack of research. Much of what is known is largely anecdotal and subjective. In large part it has been collected due to federally sponsored programs.

It is ironic that in the 1980's and early 1990's, business and industry--usually aligned with the Republican Party--turned to Democrats for social programs to eradicate illiteracy. Now, in relatively better economic times, Republicans want to eliminate programs. Whether America continues to invest in workplace programs may not depend as much upon the desire to educate citizens as upon the relative weakness or stength of the economy.

Recommendations

The literacy problems business and government underlined in the 1980's have not been eradicated. The demand for workplace literacy programs will continue. With this in mind, and from the critical perspectives brought together for this report, this section explores courses of action concerning workplace literacy.

Recommendation 1: Expand workplace literacy research efforts.

The continuance and expansion of workplace literacy programs depends upon verification of impacts. Areas of central concern are program evaluation and impacts on productivity. Research on the overall need for workplace literacy, or literacy in general, would help set priorities for funding--whether from government agencies or private sources. And any correlations between fluctuations in the economy and the plea for literacy education would also alert funders to the difference between panic and real need.

Recommendation 2: Continue funding workplace programs at the federal and state levels.

Significant progress has been made since the 1988 Adult Education Act: approaches to instruction and program evaluation continue to be honed; small businesses with less resources have been given a chance to experiment; the length of NWLP grants has been extended to three years; a healthy dialogue has been established, and the sharing of ideas has led to changes; valuable links have been made between business and providers; and thousands of learners have been served who otherwise would never have participated in

education or training. In addition, government funds are also crucial for research of important issues raised above. Without government support, progress will be interrupted and in some instances grind to a halt.

Recommendation 3: Workplace literacy advocates must prepare for life beyond the NWLP.

Despite wishes for government funding, the current political climate is likely to continue cuts and termination of numerous national programs, especially those where economic benefits are difficult to demonstrate. At the state level, block grants will have to be spread thinly among a variety of programs, thus increasing competition and the politicization of who gets what.

Business and industry will have to cover a much larger, if not total, percentage of the cost in terms of time and money. They should look to alternatives for delivery of basic skills such as hiring private consultants or arranging specialized pre-employment training.

Providers must become entrepreneurs and develop marketing skills. They stand better chances of success by approaching companies with a history of employee training. They should also be willing to cross the line

between "education" and "training" by familiarizing themselves with high-performance strategies, TQM, and other managerial developments. Knowledge of procedures within a company will aid in providing direct application of basic skills.

Recommendation 4: Align workplace literacy programs closely with the company's mission.

The kind of program desired--and the probability that a company wants one at all--is reflected in how it views the future, the employee, and literacy. Through the formation of a task force that represents all stakeholders from upper management to front-line workers, a consensus should be reached on a definition of workplace literacy, goals and objectives, and the best approach to achieve outcomes. Consistent monitoring by the task force (and by an outside evaluator if funding is available) should be used to keep coursework on track and abreast of changing needs.

Recommendation 5: Design curriculum and content relevant to workers lives.

A functional approach produces quick and tangible results. Especially for companies just beginning a workplace program, such an approach may best build the

provider's credibility and instill confidence among learners. However, basic skills and their use to complete a task at work should not be an end in themselves. Rewards will not always come by way of higher pay or job advancement; therefore, relevance should extend beyond the workplace. With activities to build learning strategies, group effectiveness, problem solving, and critical thinking, instructors can show learners the everyday applications of higher order skills away from work. Seeing that workers have a higher stake in the program through active participation and decision making will also help improve retention.

Recommendation 6: Demonstrate impacts on the workplace beyond anecdotal data.

In conjunction with the provider, companies must decide how they will know the workplace literacy program was beneficial to the overall organization. To compliment psychological benefits of programs, examples of criteria for determining overall workplace impacts might include a comparison of accidents before and after program implementation, worker comprehension of company benefits, number of returned or defective products, or the number of workers who take initiative to further their education.

Conclusion

The sense of panic that spurred workplace literacy programs hit during an economic downturn in the late 1980's. Did America recover from that recession with significantly fewer citizens deemed illiterate than before the recession? Certainly, an educated workforce is desirable, but literacy is not the only factor that contributes to a robust economy. Rather than blame workers for economic hard times, business leaders--presumably, a highly literate faction of society--must bear significant responsibility for falling behind foreign competitors. Small and large scale failures occur no matter what one's literacy level.

Business and industry were largely responsible for the surge in workplace literacy programs beginning in the 1980's. There was the inference (and often the accusation) that schools were at fault for not providing the skills needed in the workplace. In 1990, the ASTD list of skills desired by businesses upped the ante considerably beyond the three R's. It's debatable that schools ever successfully addressed such a comprehensive list in the past.

Government was, and still is, responsible for implementing the vast majority of workplace programs. Federal and state agencies responded to claims of a

skills gap by awarding grants with the hope that business would carry the ball after funding ended.

With a few exceptions, the overwhelming response from business has been to drop the ball. But the role of educator is an unfamiliar one to business. In addition to shifting resources to an area not always directly related to productivity, providing workplace literacy is a psychological shift in the mission of a business. The reluctance is understandable.

Workplace literacy programs have evolved in a very short time from a simple extension of high school to a source (at least theoretically) for empowering the worker. If business leaders are truly serious about restructuring their organizations, workers will indeed need more than strong manual dexterity skills for the assembly line work of bygone years. For many workers, returning to a traditional school setting is simply not an option. Workplace literacy programs and their customized ways of delivery offer an alternative.

Because of disparities in ability to pay for training, future-oriented companies that feel a need for basic skills improvement among employees should have a variety of options--from private consultants to government sponsored programs. Each workplace literacy site can be a valuable lab for observing real alternatives to traditional education.

Current belt tightening at federal and state levels will force business to put its money where its mouth has been. And it's largely up to providers to lead and show that workplace literacy can be beneficial. One thing seems certain: any calls for going "back to the basics" are fruitless because the basics have drastically changed.

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